Project/Activity Number: SERA41

Project/Activity Title: Beef Cattle Production Utilizing Forages in the Southeast to Integrate Research and Extension Programs Across State Boundaries: Development of Replacement Heifers.

Period Covered: 01/26/2020 thru 01/25/2021

Date of this Report: 02/19/2020

Annual Meeting Dates: 01/26/2020 and 01/25/2021

*Annual Meeting Participants*

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*Summary of Annual Meeting*

The SERA041 Annual Meeting was held virtually (via Zoom) on January 25, 2021. The meeting was not held in person due to the Southern Section Animal Science Meeting being postponed until July and COVID restricting travel for many participants.

**Introductions:** The meeting began with recognition of the executive committee, administrative advisors, and the attendees of the meeting. The executive committee is as follows: Kim Mullenix (Auburn; outgoing chair), Jennifer Tucker (UGA; incoming chair), Leanne Dillard (Auburn; secretary).

**Review of the Minutes:** Minutes of the 2020 meeting were reviewed and a motion to approve as written was presented by Jason Banta, seconded by Shane Gadberry. Motion passed unanimously.

**Election of Incoming Officer:** Nicholas DiLorenzo was nominated for position of incoming secretary for the group. Nicholas DiLorenzo was elected and will serve in this role.

**Discussion of 2021 SERA 41 Symposium:** Southern Section meeting will be combined with the National Animal Science meeting. For now, the meeting is hybrid the symposium topic is Legume Integration into Pastures.

**SAES-422 Report of Accomplishments:** Report will be due in mid-March. Report will be coordinated by Jennifer Tucker and Leanne Dillard. Combined the one from last year, normally a large discussion about what to include, but this year will be different due to COVID19. We will need information on grants and projects, as well as any cancelled meetings that would pertain. Please send information to include to Jennifer Tucker in February. Each state needs to provide multi-state initiatives (research projects, Extension programs) aligned with SERA 41 goals. David Lalman stated that Oklahoma State has been conducting a lunch meeting every Thursday since May. Each section is 4-7 week series with a different speaker each week. A few participants from outside Oklahoma. Eventually evolved invited speakers from outside Oklahoma. Mark McCann stated Extension directors discussing perspectives on audience, feel for effectiveness of virtual meetings, collective needs (i.e., UGA limited tech support for virtual meetings) in report. Curious about some of the lessons moving forward, what to forget and what to remember.

**Administrative Update:** David White shared an email with attachment summary update on NIFA. New program lead hired in July came from Nebraska before joining NIFA. A new NIFA rep next month. As soon as I know you will know and intro each other through email. Document had breakdown of grant areas and success rate. Email very helpful with grant planning. USDA- foundation for FAR funding a lot of programs right now. Need industry partners, FFAR matches industry funds. Came up with an idea that NIFA does not traditionally fund and they would match 50:50 cost share. How do we leverage the strengths of a multi-state. If each state would pony up 10k then quickly have 200K and then get industry partner for 50K. FFAR would match and you have ½ million quickly. Please reach out for any questions. Mark McCann stated Video content discussions, traditional to think each state needs their own Extension publications, there is not necessarily a need for that. Could be useful to work as a team and make regional extension publications. In UGA, if regional peer-review then I approve. Lastly, Neal Schrick gave an update of peer-review stating if your university has a peer-review of video content please let myself, Katie Mason, or Justin Rhinehart. UTK are planning to start that and we want to give them credit similar to a publication. This year Southern Section will meet with a group with North Central Dept reached out to NE and Westand want to share with other regions, but moving to more multi-state and regional only. Send minutes to me by Feb 3. Concern in Southern that multi-state projects are declining in ANSC, but many faculty are in projects in other regions. So let’s pull people from other regions to the Southeast.

**New Business:** A discussion was started on how COVID-19 has affected programming. Jason Smith stated that in October- 2 parts of a 3 part program for NCBA put online; Protein and Energy 4 members. Was not done on a locally specific basis, so if you need that information, but don’t have a specialist then you can access that information through NCBA. Brandi Karisch added that graduate students are not doing well, and need more interaction to be successful.

North Carolina has done a lot of online training, but Zoom fatigue is setting in. Have focused on agent trainings that were requested for county agents and now have the videos saved for new agent trainings. University of Georgia has been doing Beef Tips and Advice, 10-15 minutes a time get updates from specialists and spend 5-10 minutes discussing programming and how it is working. University of Tennessee is doing something similar to help stay engaged with county agents. Master Cattleman’s was delivered virtually, but still managed through agents to get them involved.

New positions include UGA Assistant/associate professor in Beef Production at UGA-Tifton and graduate research assistant; Auburn is hiring a new ruminant nutritionist with a forage focus; Clemson is hiring a dairy manager; Texas Agri-life is hiring an assistant/associate professor position; and Mississippi State is hiring a new department head and livestock judging coach.

**Accomplishments: The following activities represent multi-state Extension and research programs associated with SERA 041 participants.**

**ASAS Southern Section Regional Webinar Series for Extension Agent Training on Livestock Genetics and Genomics.** Led byPhilipe Moriel (Univ. Florida) and Victor Mercadante (Virginia Tech). Multi-state collaboration among Extension educators can successfully increase the reach of research-based educational information through online lecture-based programming. Extension specialists from the American Society of Animal Science Southern Section Extension committee developed a webinar series to provide timely livestock and forage management information and in-service training to Extension agents within the Southeast. Nine webinars were organized and delivered through Zoom across the southeastern region from September 30th to December 2nd, 2020. Webinars were recorded and archived in an online course platform through the University of Arkansas to provide a platform for Extension agents to review content and receive continuing education credits. Lectures were presented by Extension and research specialists at institutions in Tennessee, Florida, Mississippi, California, Missouri, Virginia, Texas, Wisconsin, and North Carolina. Participants pre-registered for each webinar using a university-affiliated email address. On average 50 participants were in attendance for each session (37 to 67 depending on evening) for a total of 450 attendees across the 9 sessions. Results confirm that webinars are an effective in-service training method for providing timely updates on livestock management topics for Extension agents in the region, especially when face-to-face interaction is not possible. Further this series was able to utilize expertise from states outside of the Southern region thus introducing agents to top experts in the field from across the nation. These webinars are being archived in an online course available through the University of Arkansas that will allow regional access of recordings for Extension agents to receive in-service training credits.

**ASAS Southern Section Regional Webinar Series for Extension Agent Training on Beef Cattle Reproduction: Online Course.** Led byJ.D. Rhinehart (Univ. TN) and Victor Mercadante (Virginia Tech). In 2019, eight webinars were organized and delivered through Zoom across the southeastern region. Webinars were recorded and archived in an online course platform through the University of Arkansas to provide a platform for Extension agents to review content and receive continuing education credits. Lectures were presented by Extension specialists at land-grant institutions in Tennessee, Arkansas, Virginia, Texas, and North Carolina. Participants pre-registered for each webinar using a university-affiliated email address. In 2020 these webinars were converted to a CMS online course available through the University of Arkansas to allow regional access of recordings for Extension agents to receive in-service training credits. There were 54 users of the reproduction course content in 2020. The online course is available at: <https://courses.uaex.edu/course/view.php?id=831>

**Southeastern Hay Contest:** The Southeastern (SE) Hay Contest was started by a group of Extension agents and specialists from across the Southeast region (GA, FL, SC, and AL as primary participants) in 2004 with the objective of increasing producer knowledge of the relative forage quality (RFQ) index. This program is held annually at the Sunbelt Ag Expo in Moultrie, GA, and was designed to provide recognition for high-quality forage production among hay growers in the region. Since its inception, the program has grown to over 350 hay and baleage samples annually. Forage samples were categorized into warm-season perennial grass hay, alfalfa hay, perennial peanut hay, cool-season perennial grass hay, mixed annual grass, or other hay, grass baleage, and legume baleage. Samples were analyzed for RFQ and crude protein (CP) using near infrared reflectance spectroscopy (NIRS) at the UGA Forage Testing Center (Athens, GA). Due to the canceling of the Sunbelt Ag Expo because of COVID, the results of the contest were released at the American Forage and Grassland Council (AFGC) meeting in Savannah, GA (Jan. 5, 2021). Even though COVID made it difficult for agents to interact with producers, there were a total of 370 entries, just shy of 2019, which had a record number of entries (380). Furthermore, Mississippi and Virginia both sent samples to the contest for the first time. The overall winner of the contest had a RFQ of 268 with an alfalfa hay sample from McKenney, VA. Industry support for the program continues to grow, as does producer awareness. As part of the new partnership with AFGC, the SE Hay Contest, through an industry collaborator, sponsored the Hay Quality Symposium and had a booth at the AFGC annual meeting. This partnership will continue into 2021 and will also include sponsorship of the AFGC Hay Judging Competition that occurs at the AFGC annual meeting. The program is also a collaboration of all land-grant universities in the 13 Southeastern states.

**Alliance for Grassland Renewal Novel Fescue Workshops.  
*Extension.*** The goal of the Alliance for Grassland Renewal is to promote the adoption of Novel Endophyte Tall Fescue technology where it is appropriate.  This technology has been proven by many years of research but adoption has been slow.  This group, initially formed by U. MO Extension teams academic institutions, industry partners, non-profits and the USDA to create a clear and simple message, and to provide a uniform approach to education on the topic.

Key participants.  Craig Roberts (MO), Ray Smith (KY), Matt Poore (NC), Jennifer Tucker (GA), John Andrae (SC), Gabe Pent (VA), Tony Stratton (Ag Research USA).  Each state conducting a workshop has multiple faculty involved in the development and delivery of the program. Cooperators.  University of Missouri, University of Kentucky, North Carolina State University, University of Georgia, Clemson University, Virginia Tech, Ag Research USA, Noble Research Institute, Forage and Grassland Foundation, Inc., USDA-NRCS, KY, NC, and VA Forage and Grassland Councils, Dow AgroSciences, DLF seeds, Pennington Seeds, Barenbrug Seeds, Mountain View Seeds.  The Alliance scheduled one-day workshops in Virginia, North Carolina, Georgia, Tennessee, Kentucky, Arkansas, and Missouri for 2020, however due to the COVID-19 pandemic, the workshops, except for Virginia and North Carolina, were forced to be cancelled. However, the Alliance has scheduled workshops for Kentucky and Missouri in 2021 as well as made moves to host a virtual workshop in an attempt to reach a broader audience.

**Development of online alfalfa management Extension education resources amid the COVID-19 pandemic:** Prior to the COVID-19 pandemic, many Extension programs used web-based resources but balanced those with in-person events for interpersonal connection with producers and for individuals with limited access to technology. In 2020, in-person Extension programs were cancelled or converted to online versions. This was the case for the *‘Alfalfa in the South’* (AITS) program, a collaboration between Auburn University (AU) and University of Georgia (UGA). Two online AITS programs were held (May and Sept) and are examples of rethinking traditional models and optimizing resources to prioritize our commitment to clientele. In its first program, the program content was delivered through 1) a series of webinars from AU, UGA and University of Florida (UF) Extension Specialists (n = 6 webinars) and a 1-h live roundtable discussion held through Zoom on May 13, 2020. The roundtable consisted of a moderator interacting with five panelists (faculty, Extension agents and producers) answering live questions from the audience (n= 45 participants). All content was archived by the Alabama Cooperative Extension System (ACES) for later access using online resources. The second program occurred in Sept 2020 as a collaboration between AU, UF and UGA Specialists. This program included several pre-recorded short videos and e-publications on topics in establishment and management of alfalfa in the South. In 2020, the web-metrics gathered for the ACES webpage and Youtube channel across these programs sums over 3000 views of alfalfa resources. Similarly, engagement on the AL Beef and Forage Extension Facebook pages were over 3000 people. Although a traditional formal post-programming survey was not conducted with participants, an online survey was distributed simultaneously in the south region (n=12 states) from May through December 2020 aiming to identify main challenges and limitations of alfalfa adoption. The results (n=212 respondents) showed approximately 65% participants already invested time in learning about alfalfa using Extension online programs and resources available. This shows increased importance of online outreach as a tool to maintain relevance and connection with clientele.

**Multi-State Integrated Research-Extension Initiative on Utilizing Alfalfa in the Southeast**

Prior to the COVID-19 pandemic, many Extension programs used web-based resources but balanced those with in-person events for more personal connection with producers and for individuals with limited access to technology. In 2020, in-person Extension programs were cancelled or converted to online versions. This was the case for the ‘Alfalfa in the South’ (AITS) program, a collaboration between University of Georgia, Auburn University, and the University of Florida/IFAS. Two online AITS programs were held (May and Sept) and are examples of rethinking traditional models and optimizing resources to prioritize our commitment to clientele. In its first program, adjustments were made in Mar to provide delivery of the program content through 1) a series of webinars from AU, UGA and University of Florida (UF) Extension Specialists (n = 6 webinars) and a 1-h live roundtable discussion was held through Zoom on May 13, 2020. The roundtable consisted of a moderator interacting with five panelists (faculty, Extension agents and producers) answering live questions from the audience (n= 45 participants). All content was archived on by the Alabama Cooperative Extension System (ACES) for later access using online resources. The second program occurred in Sept 2020 as a collaboration between AU, UF and UGA Specialists. This program included several pre-recorded short videos on topics related to establishment and management of alfalfa in the South.  The web-metrics gathered across these programs for the year sums over 2500 views of alfalfa resources published in 2020 on the ACES webpage and YouTube channel., also engagement. Also, engagement on the AL Beef and Forage Extension Facebook pages were over 3000 people. Although a traditional formal survey was not conducted with participants post-programming, increasing contributions to web-based content delivery and improved web engagement from 2019 to 2020 demonstrate increasing interests in alfalfa programming through online delivery.

**Mid-South Stocker Conference**

The southeast is home to many beef cattle stocker and backgrounding enterprises. There are few educational programs developed for this segment of the beef industry and the Mid-South Stocker Conference has established itself as a great program for more than a decade. The program is a multi-state effort involving Kentucky and Tennessee Extension, Cattlemen’s Associations and industry representatives. This year’s conference was hosted by the Warren County Extension agent, Joanna Coles. Speakers from Iowa, Arkansas, Kentucky and Tennessee delivered educational presentations on internal and external parasites, economic risk management, on-farm field necropsy and feedlot perspective on procuring feeder cattle. Additionally, virtual tours of cattle operations demonstrating how individuals are being successful in managing their enterprises were shared. Two local Warren county operations were showcased. The program had a near record attendance with close to 150 participants. Post-program surveys (65 collected) indicated the potential economic impact of the program to average $5,372/operation and when extrapolated to the number of participants the impact is near $779,000 due to improved knowledge gained. Knowledge assessed before and after the program on a 5-point likert scale revealed 1.2-2.6 points increase on average. The average number of cattle managed in backgrounding/stocker operations was 388 head while cattle finished averaged 60 head in the state and 245 head outside of Kentucky. The average number of beef cows managed was 78 head. This suggests that the average producers attending this Stocker conference are larger in size than the state average beef farm. We will continue to provide this program as long as the interest and participation remains strong.

**Sire milk EPD value and impact on milk and component yield**

The University of Kentucky initiated a study in collaboration with North Carolina and Virginia to study the relationship of sire milk EPD on milk yield and milk components. The genetic trend in the industry for the Angus breed and others are increases in milk and weaning weight EPD values. These increases in maternal contributions to growth of calves is expected to result in greater nutrient needs to support this increased growth. The 2016 NASEM committee stated there was insufficient data on the effect of age of cow, breed, plane of nutrition and other factors to account for variations in milk component yield in beef cows. This study aims to provides more information related to sire influence on milk component and milk yield of beef cows. A better understanding of these factors will allow nutritionists to make better recommendations on the nutritional needs of beef cows. A grant was submitted to the Angus association but was not funded.

**Planned but cancelled events due to COVID-19:**

* Deep South Stocker Conference (UGA, AU, Miss State).
* In-Person Alfalfa in the South Workshop (UGA, AU, UF)
* Train the Trainer Trouble Shooting Electric Fencing Systems (NCSU, UK, AU, UGA)